UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES, AND
TOXIC SUBSTANCES

MEMORANDUM

DATE: 20-AUG-1998

SUBJECT: ID# MT980004. Section 24(c) Special Local Needs Registration. Dicamba (Clarity® Herbicide) on Small Grains, Pasture, Rangeland and Fallow. Chemical#: 029801. Caswell#: 295. DP Barcode: D247623. MRID No. 44089305.

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TO: Joanne Miller/Susan Stanton, PM Team 23
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The state of Montana has approved a Section 24(c) registration for the use of Clarity® Herbicide to control annual weeds by aerial application for small grains, pasture, rangeland and fallow in Montana. The proposed 24(c) label includes aerial application instructions specifying the use of 1 - 5 gallons of diluted spray per acre and recommends the use of a drift control agent.

CONCLUSIONS

1. HED concludes that the wheat field trial data submitted in support of this SLN registration are adequate, and is willing to translate the wheat results to barley and oats. However, crop field trial data on grasses, pasture and rangeland is needed to support the requested ultra-low volume (ULV) aerial application.

2. This Section 24(c) includes preharvest use on small grains and grasses. Preharvest use of dicamba on these crops is currently under review. Until the Agency recommends approval of the preharvest uses in connection with PP#4F3041, the proposed Section 24(c) registration cannot be allowed.

3. HED cannot determine if existing dicamba plant tolerances are sufficient to support this Section 24(c) registration until a decision is provided on the preharvest use petition currently under review.

RECOMMENDATIONS

HED objects to the issuance of a Section 24(c) registration for Clarity® Herbicide use on small grains, pasture, rangeland, and fallow to control annual weeds in the State of Montana. Grass field trial data are needed to support ULV use on pasture, rangeland and fallow.

Residues of dicamba in/on wheat, barley, oats, and grasses resulting from this use may exceed the published tolerances. Approval of the proposed preharvest uses of dicamba (PP#4F3041) and the submission of satisfactory field trial data as specified above is required before a favorable recommendation can be made for this Section 24(c) registration.

Detailed Considerations

Background

Tolerances are established under 40 CFR §180.227(a) for the combined residues of the herbicide, dicamba (3,6-dichloro-*o*-anisic acid) and its metabolite 3,5-dichloro-5-hydroxy-*o*-anisic acid in or on various raw agricultural commodities including wheat, barley, and oat grain at 0.5 ppm and wheat, barley and oat straw at 0.5 ppm. This section also lists tolerances for grasses (hay, pasture, and rangeland) at 40 ppm. Tolerances are established under 40 CFR §180.227(b) for the combined residues of dicamba and its metabolite, 3,6-dichloro-2-hydroxy-benzoic acid in/on the fat, kidney, liver, meat, meat byproducts of ruminants and milk.

Clarity® Herbicide (EPA Reg. No. 7969-137) is a registered pesticide of BASF Corporation. The spray concentrate formulation contains 56.8% of the diglycolamine salt of dicamba (equivalent to 4 lbs dicamba/gallon) as the active ingredient.

BASF submitted a petition (PP#4F3041) for the preharvest use of dicamba on wheat, barley, and soybeans. The preharvest use results in higher dicamba residue levels than the tolerance levels listed in 40 CFR §180.227. This petition is currently under review; until it is approved and the appropriate adjustments are made to the affected tolerances, the published dicamba tolerances can not be assumed to cover the proposed preharvest uses.

Proposed Use

The application directions contained on the current Clarity® Herbicide label are as follows:

Application of Clarity® may be made before during or after planting of small grains. For best performance, make applications when weeds are in the 2- to 3-leaf stage and rosettes are less than 2 inches across. Application of Clarity® may result in crop leaning. This condition is temporary and will not reduce crop growth. Use Clarity® at 2 to 4 fluid ounces per treated acre in wheat, fall-seeded barley, and oats, and at 2 to 3 fluid ounces per treated acre in spring-seeded barley. Clarity® must be applied to fall-seeded wheat prior to the jointing stage. Applications to spring-seeded wheat must be make before wheat reaches the 6-leaf stage. Clarity® must be applied to fall-seeded barley prior to the jointing stage. Clarity® must be applied before spring-seeded barley exceeds the 4-leaf stage. Clarity® must be applied before spring-seeded oats exceed the 5-leaf stage. Applications to fall-seeded oats must be made prior to the jointing stage.

The supplemental label for the proposed preharvest application of Clarity® Herbicide to wheat and barley follows:

Apply ½ pint per treated acre (0.25 lb a.e./A) Clarity® Herbicide as a broadcast or spot treatment to annual broadleaf weeds when wheat or barley is in the hard dough stage and green color is gone from the stems. A waiting interval of at least 14 days is required before harvest.

The application directions contained on the proposed Section 24(c) label are as follows:

When using aerial application equipment, apply Clarity® Herbicide using 1 - 5 gallons of diluted spray per acre. The use of a drift control agent is recommended. All applicable directions, restrictions, precautions and conditions of sale and warranty on the EPA-registered label are to be followed.

Residue Data

Field Trial Data

The petitioner referenced a wheat field trial study to support the present Section 24(c) registration (MRID 44089305).

Residue data on wheat were reviewed in connection with a petition amendment PP# 4F3041 (16-JUL-1998, S. Chun). Four side-by-side wheat field trials were conducted in Montana (2), Oklahoma, and Kansas to compare the dicamba and 5-hydroxy dicamba residue levels resulting from ground and aerial application methods. Two applications of dicamba were made to the wheat during this study. The first application consisted of a spring ground broadcast treatment of 0.25 lb a.e./A made immediately prior to first joint. The second application consisted of a ground preharvest treatment of 0.25 lb a.e./A made to half the plots and an aerial preharvest treatment of 0.25 lb a.e./A made to the other half of the plots. The PHI was 7 days for the preharvest treatment and the spray volume was 1 gallon per acre for all aerial applications. Residue data was collected for wheat grain and straw.

Analysis of Variance (ANOVA) statistical analysis was performed on the data collected from the four locations comparing ground to aerial application. The results indicate that the difference in the magnitude of the residues observed in grain and straw was not influenced by the choice of ground or aerial dicamba application. However, the magnitude of the residue was found to depend significantly on trial location.

Conclusions

For this Section 24(c) registration, the side-by-side wheat field trials adequately demonstrate that dicamba residues resulting from ULV aerial application are similar to those obtained by same rate ground application methods. The wheat results can be translated to barley and oats. However, because Agency review of the preharvest application of dicamba has not been completed, HED can not recommend in favor of the proposed Section 24(c) registration at this time.

The petitioner did not submit any crop field trial data to support the ULV use on grasses. This is a deficiency. The petitioner may either delete pasture, rangeland and fallow from the 24(c) label or provide the required crop field trial data.

cc: W. Donovan, Chemistry File, Reading File
RDI: G. Kramer (18-AUG-1998), Team (20-AUG-1998)
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